Web 2.0 Implementation Plan

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Part I: What I did at summer camp is…

For me there were two main cores to this class when it comes to 21st century learners. The first was how do we get our 21st century learners to intake what we want them to know and be able to do. The second core is what is the final product that we hope to create and send out into the world. Both of these cores are what I based my research and resource development around.

To kick off this class we read Wagner’s opening about the global achievement gap. In this he states that many 21st century learners struggle with the fact that they were educated in an old world education system and are faced with a new world work place that they are not ready for. I believe this is were we need to address the two core points of how do we educate these learners and what final product to we want to create of them. (Wagner pg.14)

As I explored beyond this article I narrowed my search to focus in on what how these two core needs of learners are specifically taught and instilled in learners in a science classroom. Many articles focused on what lab equipment they thought was necessary for a 21st century science classroom. Then I came across an article by Shelly Wright and in that article she wrote that inquiry and technology are a natural part of a science classroom. Which lead me to look at what I was doing and how that grew knowledge and abilities in learners to do science. (Wright pg. 4)

In the following paragraphs I would like to outline how I see the 21st century learning in action in my classroom. I used the 7 survival skills as road map to what a successful 21st century learner should look like.

Critical thinking and problem solving are huge in my class.  We do many open ended labs that can be solved in many different ways using the ideas and theories that we covered in class.  I enjoy seeing the differences in what students come up with and it also allows me to see who has the ability to apply the concept and who is still a bit clueless. In the coming year I hope take my labs and make them more inquiry based to allow for learners to develop their own questions and create their own pathways to solutions.

Collaboration and leading by influence happens all the time in my room.  The lay out of my room lends to this.  I have tables with 3 students per table and for assignments, projects, games, labs they get to work with each other.  Now at the begging of the year they need a whole lot of scaffolding to work with people other than their friends, but near the end of the year it becomes a norm.  This is a part of my class that I am always trying to tweak.  I am always looking for ways to group learners more effectively. In the following year I hope to continue to have learners engage with each other as seat partners. Outside of my class, but in the school as a whole next year I will be working with the WEB leaders of our school. In this capacity I hope to create relationships between my 6th and 8th graders that lend to creating a better community at VandenBerge.

Agility and adaptability would be an area where I feel like  I may need a little work.  In some of my labs we repeat the experiment to see if we can make a better design, but I would like to make this process happen as they work.  The ability to realize that something is not going to work while building it and adapt and fix it while continuing forward would be something that many 6th graders struggle at. Next year I hope to use more inquiry in the labs I create for learners so that they rely on their own intuition to ask questions and create processes to find answers.

Initiative and entrepreneurialism – The initiative aspect of class I implement by making a lot of the things we do into games.  I record top scores on the board and they like to compare with other hours and each other.  We always turn the results into questions of how did they do that the next day.  The selling side, I do not really do a lot with. I have in a few labs added the caveat of how would you sell something you designed. In the coming year I hope to expand on the labs my learners do and ask them how their conclusions could help the greater good of the world.

Oral and written communication.  I have the students do many oral presentations in my room, we also dabble in a little acting.  We act out theories, concepts, models to help them make more sense.  From my AK days I learned how to do a lot of teaching through story telling.  Written communication, I have students write out an exit ticket that I read at the door before they can leave everyday. In the coming year I hope to continue acting out learning and collecting exit tickets from learners.

Accessing and analyzing information – One of the big lessons I try to teach learners is to always ask questions and that the process that you go by finding the answers to those questions is what science is made up of.   We also talk about how our book only gives the simple answers and that science has so much more depth than what we sometimes talk about.   Lastly I always try to instill in learners that there is no one right answer. In the coming year I hope to launch the year with the concept that we should always ask questions and that the road to a solution is lined with many failures before we come upon our successful conclusion.

Curiosity and Imagination – Are always abound in my room.  I always look for different ways to present class to learners and I use that to encourage learners to let their inner self out and express what they know in their own way.  In a year I am so lucky to see so many creative things that spring out of learners curiosity.  I had a student write me a report on how the flying house in UP could be real.  I had many other learners turn their presentations into songs and even a few dances.  My face ended up on a mermaids body as a part of a simple machine project that a few young ladies created.  I had a plethora of pictures that were drawn for me to hang up on my closet door.  Everything from how I should love one direction to how we should all save the whales.  The Curiosity and Imagination is my favorite part of 6th grade. I hope to continue to inspire my learners to be curious and imaginative in the coming year. I believe one of the greatest gifts many people lose a long the way in life is their imagination and that happens partly because of schooling. I would like to believe that I can help to send a bunch of Peter Pans out in to the world that still have imagination to create the things that have yet to be thought of. And that they live their lives not afraid to die, because to die would be an awfully great adventure.

My enduring understanding from this learning experience is that we want to create a classroom with lessons that have students developing 21st century skills, so that when they leave our rooms they can carry those skills with them out beyond the classroom.

The Web 2.0 tools that I hope to implement the most next year will be the ones that help learners achieve the creating level of blooms taxonomy. I hope to have learners creating their own questions for labs, creating their own process for how to solve problems, and from those questions and processes I hope for them to create their own conclusions on an idea. I think many of my tools will aid them in this process.

Part II: Implement this!

During this class I made a list of technological resources that I already use in my classroom. Now I am already implementing these things, but what I have realized through this process is that I need to be implementing them with a bit of a twist. I have to admit, that on some labs and projects we do in class I spoon-feed learners the process of how to find the answer. What I hope to do in the next year is to start off with a little spoon-feeding to establish the process of science with learners, but then move away from that and have them create their own questions to invest their energy investigating through the lab. When I looked at Wagner’s 7 survival skills the two that I hoped to beef up in my classroom were critical thinking and problem solving along with agility and adaptability. I believe by allowing learners to propose their own questions or hypothesis on problems we can create a classroom climate that works harder to reinforce those ideas.

As for how I will be using my web tools this year, I hope to improve my lessons in a variety of ways by using them. To start off, I would like to keep on using PhET to demonstrate concepts for the class and by doing this students will be at bloom’s creating level, because they will create the examples they are going to learn from. I hope to use TED Ed and Untamed Science to inspire blooms level of understanding in learners. That they have a chance to see a topic in a different light and hopefully by seeing some of the topics in action, in ways we can not recreate in the classroom they gain a greater experience. I am hoping to implement Google Docs this year to track learners through the RTI process and by using this we can disseminate the information about that learner amongst our staff in a more fluid and effective manor.

In the coming year I hope to do away with the textbook a little more. From the usage I saw of our I-pad cart last year I think there is a good chance I can horde them a little this year. What I hope to do with them is create a few lessons on CK-12. With these lessons I hope to create an open forum of learning for my students. Where they read on topic and then choose links to dive deeper into that topic and then we can finish up with discussions of what they found along their adventure with that topic.

I fore see a few roadblocks in this process I hope to implement. As far as google docs goes, I have many “seasoned” teachers that get mad when something new is on the computer to do. Last year I was told it was unreasonable to expect people to put their agenda items on our google doc agenda before the meeting. The crazy part is, everyone has an I-pad and can access it in less than 10sec using the google docs app. Another road block I foresee is teaching learners initially how to use, access, and explore appropriately on the I-pads.

Part III: Are we there yet?

For the coming year I would like to set three goal points for the year to guide where I want my learners to be in becoming 21st century learners. At the begging of the year I would like to walk learners through the Scientific process and the Engineering Model to help them learn the steps. Nearing the end of the first quarter I hope to have this instilled in learners. In the second stage of developing my learners I hope to begin to have them create their own questions/ hypothesis on what problem they are solving. Also I will begin the process of how do you set up your own experiment. Learners will determine what things they need to test for and what data they need to collect during this process to prove or disprove their hypothesis. I hope to have this in place and have all learners able to do this by the end of the third quarter. In the last quarter I hope to make the last great jump of knowledge. I want learners to make what they did their own. I will be working with learners to create their own conclusions from what they did and be able to express that conclusion to other learners. I believe by developing this process learners will develop in all of the 7 survival skills outlined by Wagner.

The way that I am going to assess myself in this process is how well they do with the more open-ended labs. If learners are still asking for more guidance or do not know how to create the questions, that will be an indication to me that we need to work more on how to create good questions. With open ended labs you can see from many of the answers learners give whether or not they understood what was being ask of them.

For the assessment of my learners, I do not feel like it would be an effective use of my time to create assessments just on the tool itself. What I will be spending my time testing will be the concepts that the tool teaches. Next year I am partnering up with teachers from other buildings to create common assessments. My hope for these common assessments is that we can build large over arching tests that look at the standards and when learners show they have not mastered a concept we can use the RTI process to help them gain some clarity with it.

Part IV: what are other authors saying about it.

In my research the first article I came across was by Walsh. She discussed many points about how we need to create 21st century teachers. “Teacher education has long struggled both to professionalize and to fully integrate itself into mainstream academia” (Walsh.) She discusses how the preparation of teachers in the past has been at large a disservice to the profession. In the past we made teachers that knew it all and then were done with their learning. The article discuss how we need to create a philosophy of life long learning, much like the medical community has with creating a community of learning amongst doctors. She highlights that teachers need to refocus their learning on reading skills, common core, classroom management, and proper assessment.

In the Dunn article they highlighted many characteristics that effective 21st century teachers must have. Much like the 7skills we talked about he mentions that a teacher must be an adaptor and respond to the ever change world around them. He then talks about how an educator must be an effective communicator. Just like the Walsh article he mentions how teachers much have a philosophy of life long learning. He talks about how teachers must be visionaries and look towards what the future can hold for the learners they are working with. Much like our blog article teachers must also be leaders for the young minds we are surrounded by. As well as being a leader you must be a model of what they should strive to be. Educators will need to collaborate with one and other. Lastly you must be risk takers. “The key is to be able to figure out how every single one of the  new skills and tools works for you” (Dunn).

Recent scholarship, however, has emphasized that meaningful learning is a product not of activity per se, but of sense-making discourse aimed at developing conceptual understanding and the links between theory and observable phenomena (Windshitl). In Windshitl’s article he makes a big point of having educators make connections for learners using their prior knowledge. He then goes on to discuss the quote above that in labs learners must not just be given a lab to do. That they must explore their way through it. That the process and the questioning in that process are very valid and needed for the learner to understand the greater concept being taught.

The article by Wright continued to keep me thinking about the implementation of inquiry into my labs in class. In her classroom much of the technology she uses to create an open inquiry based room comes from the open source technology she allows learners to use. This is an idea I have been hoping to press with my admin at the begging of the year. “I used to have students sketch pictures of lab slides. The truth is most of them didn’t look anything like what was on the slide” (Wright). She then goes on to say that she allows them to take pictures on their phones and use those to learn from and even has some post them to facebook to continue the learning.

The article about the 6 essential tools of a science room was basically a list of what you should have in a science room. On some of them I agree and with others I am not so sure that they are must have items. The most ridiculous one was the scribe pen. I have used one before, they are a neat little toy and I am sure they are great in journalism and a few other occupations, but I don’t believe it’s very essential to any teacher. The one I will agree on is probe wear. I want an inquiry based room and to allow learners to collect data on variety of variables probes are an ideal 21st century tool.

The 21st century teacher site was a great source of links to a variety of resources dealing with the subject of 21st century learners and educators. It was a great list of many of the Web tools that we discussed in class. It also is an ever updated site that can constantly enrich my teaching habits.

Work cited

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